



Welcome to the summer 2023 AI-ALOE Spotlight newsletter. In this edition, I'm thrilled to share the latest strides in our mission to advance education through Artificial Intelligence. This summer, pivotal meetings have marked our path. Our External Advisory Board (EAB) convened at Georgia Tech in May, fostering dynamic discussions among researchers and collaborators – both in-person and virtual. Meanwhile, our annual review with the National Science Foundation

(NSF) in June showcased our progress and commitment to AI-driven education. In the following pages, we dive into our unwavering commitment to redefine AI in education. From our transformative AI-ALOE Technologies to our pioneering work in Revolutionizing Education with AI to reshape the educational landscape.

Our impact resonates, with recognition in the Teaching and Learning Edition of the 2023 EDUCAUSE Horizon Report. Notably, our partnership with 1EdTech Consortium earned us the Power Learner Potential Organization Award, affirming our dedication to meaningful collaborations. In this newsletter you will also hear from Jinho Kim who shines as an AI-ALOE graduate research assistant, embodying our dedication to nurturing future AI leaders as well as her advisor, Min Kyu Kim, who is a vital contributor to the AI-ALOE team, driving personalized learning through the SMART system.

Engagement knows no bounds as we prepare for the second annual SAIL Summit, to continue fostering connections and sharing AI strides in October. As our journey unfolds, join us by subscribing and following us across platforms, as we reshape education with the force of AI.

SUMMER 2023

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Highlights of Significant Achievements and Impact

AI-ALOE successfully completed its annual review with the National Science Foundation (NSF) on June 22 and June 23. In the Institute's annual report submitted to NSF, we highlighted the following significant achievements and impact we have achieved during the past year:

1. Development and implementation of Apprentice Tutors to enhance math skills learning.
2. Development and implementation of SMART to enhance concept learning.
3. Deployment of VERA in classes at the Technical College System of Georgia (TCSG) led to unexpected uses as an assessment tool on final exams.
4. Development of intelligent textbooks for enhanced lifelong learning (iTELL).
5. Development of a unified technology and data architecture for deploying AI technologies, collecting, de-identifying, storing, and sharing data.
6. Development of a prototype of multi-AI dashboards as a visualization system to enable teachers to better understand how learners are engaged with the course and the AI technologies.
7. Integration of Jill Watson with ChatGPT to improve Jill Watson's performance across multiple dimensions.
8. Integration of SAMI with ChatGPT to help build SAMI more efficiently and easily.
9. Prototypes of two teachable AI tutors created to enable teachers to create tutors, teach agents how to solve problems, and deploy the tutors to their students.
10. Development of AI techniques for interactively teaching AI agents about question answering.
11. Development of AI techniques for personalization in the Apprentice Tutors and SMART.
12. Extensive participatory design that includes internal analysis, external stakeholders engagement, data analysis, and co-design.
13. Engaging 164 classes and 14,202 learners at Georgia Tech and TCSG with AI-ALOE technologies.
14. Organizing five webinars featuring speakers from diverse institutions and organizations.
15. Leading two symposiums on AI in education, bringing together the AI institutes focused on learning and education and engaging a larger research community.
16. Convening representatives from 15 AI institutes to discuss and model strategies for ethical development and use of AI applications.
17. Collaborating with 18 AI institutes to feature their research in a special issue of AI Magazine.
18. Forming, through Summit of AI Institute Leadership (SAIL), a special interest group of representatives from many other AI institutes to discuss and develop tools and practices for adult learning.

External Advisory Board Meeting

AI-ALOE's external advisor board (EAB) is comprised of ten distinguished scholars and researchers who were nominated and selected by the AI-ALOE team members. They provide research oversight, advice, and guidance to help ensure that the Institute's goals and objectives are met. We invited the full AI-ALOE team to participate in the EAB meeting. As a result, here were a total of 40 participants, 35 attending in person and 5 virtually.

The Institute convened its External Advisory Board (EAB) on May 18-19, 2023. The EAB members both in the room and online were very active in asking questions and providing feedback throughout the day. Following presentations, the poster session, and discussion the EAB caucused separately to discuss their impressions and develop the following comments which were discussed with the AI-ALOE Leadership team and its Executive Committee. During lunch AI-ALOE researchers and graduate research assistants presented on current research projects via posters and discussions. This highly interactive session enabled the EAB members to get to know the AI-ALOE team and the work they are doing. The posters presented included:

Clustering Cognitive engagement Changes in Longitudinally Threaded Discussion Data from a Graduate-Level Online Course

Yoojin Bae, Jinho Kim, Min Kyu Kim

Jill Watson with ChatGPT

Elaine Cortez, Pranav Guruprasad, Sandeep Kakar, Robert Lindgren, Pratyusha Maiti, Sanjeev Rao, Karen Taneja, Ashok Goel

KnowledgeVIS: Visualizing what Language Models have Learned

Adam Costia, Alex Endert

Participatory Design for Human Well-Being

Michael Hoffmann, Ruth Kanfer, Adie Shimandle, Sanaz Ahmadzadeh Siyahrood

An Investigation of Knowledge-based AI vs. Human Evaluation in the Context of Academic Summary Evaluation: Similarities, Dissimilarities, and Being Toward Mutual Understandings

Jinho Kim, Golnoush Haddadian, Min Kyu Kim

iTELL Intelligent Textbooks for Education and Language Processing

Wesley Morris, Langdon Holmes, Scott Crossley, Qiusi Yan

Apprentice Tutors: A User-Friendly Platform for Building Personalized and Inclusive AI Tutors

Glen Smith, Adit Gupta, Christopher MacLellan

Mutual Theory of Mind in Human AI Communication

Qiaosi Wang, Benjamin Faught, Christopher Leung, Chidimma Anyi, Jingying Zeng, Sandeep Kakar, Ashok K. Goel



AI-ALOE Technologies

AI-ALOE 2023 Projects & Research Video Presentations

The AI-ALOE Institute leads the charge in the rapidly advancing field of Artificial Intelligence (AI), focusing on pioneering AI theories and techniques to elevate adult online education. Committed to nurturing a research community of devoted computer scientists, we strive to propel the use of AI in education forward. Our research endeavors center around cutting-edge AI technologies that enhance the learning experience for adult online learners. Our ultimate goal is to make education accessible, flexible, and effective for all individuals, regardless of their background or circumstances. By doing so, we envision transforming the landscape of online education and forging a more equitable and inclusive future. Check out the 13 videos below to see the latest innovations in AI-ALOE technologies. Each of our research videos can be found at <https://aialoe.org/presentations/>.



Participatory Design for Human Well-Being



Mutual Theory of Mind



Machine Teaching



VERA Scientific Modeling Simulation



Social Presence



iTELL



Teachable AI



Teacher Presence



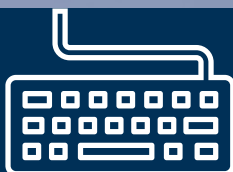
Concept Learning through Modeling Knowledge Structure



Personalization in Concept Learning



Data Visualization



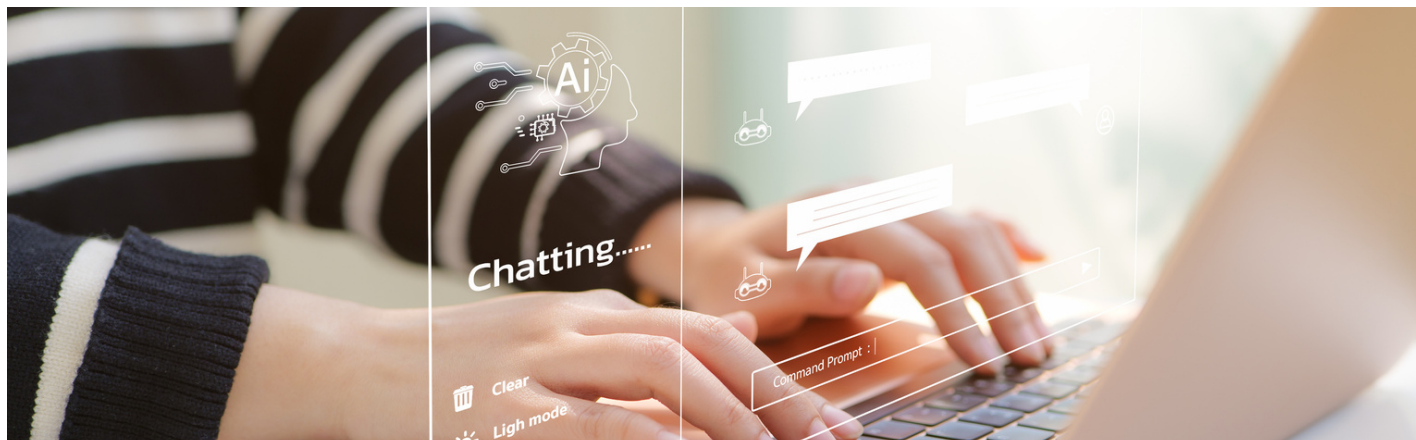
Large Language Model



Skill Learning in Mathematics

Revolutionizing Edu with AI

with Teachable AI



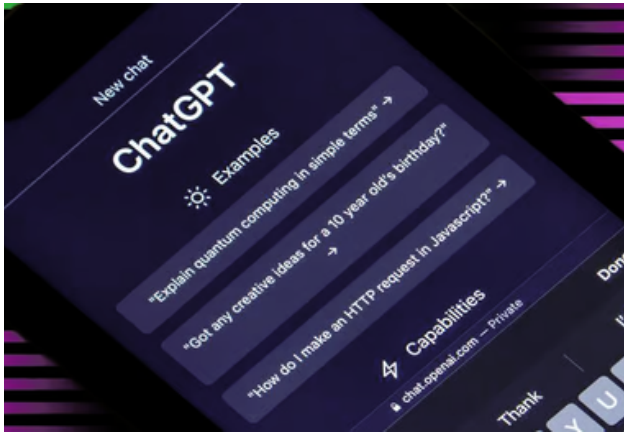
We are working towards creating a teachable AI technology that lets teachers build and modify intelligent tutoring systems to support their classes. The aim is to build an interactive AI agent that lets teachers author tutors through teaching rather than programming. To create a tutor for a new topic, the teacher provides the agent with examples of how to solve problems and corrects its problem solving on novel problems—similar to how a teacher would teach a human student. Once the agent learns how to do the task, it can then provide one-on-one instruction and coaching to students at scale.

We are currently building a platform called Apprentice Tutors that let teachers create their own tutors using this technology. We are currently focusing on deploying tutors into classrooms through Blackboard, and actively testing tutors to support college algebra classes at TCSG. This past year, more than 2000 TCSG students have had access to tutors through our platform.

While we are working on the foundational AI research about how to teach machines, we are also collaborating with teachers to build effective tutors. As students interact with the tutors, we use their data to assess their knowledge and to personalize tutor behavior to their current learning state. We also use this data to analyze class performance and assess student learning.

One of the challenges we face is building technologies that are accessible and personalized to teachers and students. We are working with teachers to build tools they can use to create personalized educational technologies for their classes. On the technical side, we're trying to advance AI technologies to enable learning from teachers with just a few examples. Our goal is to teach agents with as few as 10 demonstrations so that they can teach students effectively. This is a foundational AI challenge that we are working to overcome.

AI-ALOE Builds on ChatGPT



Teacher Presence in Online Education: The challenge of teacher presence in online education is well-known. Often, learners engage with teacher-prepared digital content like videos and ebooks, lacking meaningful interaction. This interaction is vital for motivation and engagement. Georgia Tech's Design & Intelligence Lab addressed this with Jill Watson, the pioneering virtual teaching assistant. Jill Watson, powered by ChatGPT, efficiently handles routine queries, expanding teachers' impact. Initial success led to deployment in 40+ classes with 12,000+ students. Now, Jill+ integrates class documents for broader use, aiming to enhance learning for more students.

Social Interaction in Online Education: The absence of social connection is a common issue in online education due to its asynchronous nature. Learning encompasses cognitive, social, and emotional aspects, necessitating connectivity. Georgia Tech's Design & Intelligence Lab developed SAMI, an AI-driven social agent. SAMI, now SAMI+, leverages ChatGPT to analyze learner posts, match interests, and foster connections. Deployed in 30+ classes with 8,000+ students, SAMI+ is set to deepen meaningful matches, promoting a stronger sense of social belonging.

Teachable AI Assistants: Georgia Institute of Technology's Teachable AI Lab taps into GPT's potential to democratize intelligent tutoring systems. GPT translates teacher instructions into task knowledge, empowering AI teaching assistants. These assistants offer personalized guidance to all students, bridging GPT's limitations. By converting language into symbolic structures, Teachable AI Lab revolutionizes learning, enabling educators to harness AI's full potential.

Personalized Learning with Intelligent Textbooks: Vanderbilt University's Language and Educational Analytics Research Lab employs large-language models (LLMs) within the iTell framework for tailored textbook feedback. LLMs assess summaries and generate questions based on reading patterns. Integrating ChatGPT enhances iTell, providing users with comprehensive material understanding through interactive questioning.

Awards & Accomplishments



AI-ALOE is featured in the 2023 **EDUCAUSE Horizon Report | Teaching and Learning Edition**! Being included in this esteemed publication is a great honor for us and we couldn't be more excited to be part of it. EDUCAUSE focuses on advancing higher education through the use of technology. Their Horizon Report series provides valuable insights into the emerging technologies and trends that are likely to have a significant impact on education in the coming years. Being featured in the report is a testament to our efforts to innovate and contribute to the future of education.



AI-ALOE and Georgia Tech have been honored with the Power Learner Potential Organization Award from 1EdTech Consortium™. The award was presented at the 2023 Learning Impact Conference in Anaheim, California. AI-ALOE's partnership with 1EdTech utilizes learning data and analytics to drive impactful educational outcomes. AI-ALOE Director Ashok Goel expressed gratitude for the award, emphasizing their commitment to empowering learners through innovative educational technologies. 1EdTech Consortium fosters collaborations to enhance digital learning solutions, and their Power Learner Potential Awards recognize organizations that elevate educational collaborations. [Read more](#)



Georgia Tech's Teachable AI Lab advances to the Discovery Round of the VITAL Prize Challenge with the "Apprentice Tutors" concept. Their user-friendly platform aims to create personalized and inclusive AI tutors, empowering educators to deliver tailored learning experiences for improved student outcomes. Learn more about the VITAL Prize Challenge at <https://beta.nsf.gov/tip/vital-prize-challenge>.



Congratulations to **Min Kyu Kim**, associate professor at Georgia State University and AI-ALOE Researcher, for receiving grant Award Number 2315709 under the NSF 23-510 Improving Undergraduate STEM Education: Directorate for STEM Education funding opportunity. The project titled "Artificial Intelligence-Scaffolded Pre-Classroom Learning for Large, Introductory Undergraduate Physics Courses" is set to run from August 1, 2023, to July 31, 2026. This research and development award, managed by the Division of Undergraduate Education (DUE), aims to enhance undergraduate physics education through innovative AI-scaffolded pre-classroom learning strategies. A well-deserved achievement!

Team Member Spotlight



Min Kyu Kim

Meet AI-ALOE Researcher **Min Kyu Kim**, an associate professor in the College of Education and Human Development at Georgia State University. Kim received his Ph.D. from the Learning, Design, and Technology program at the University of Georgia in May 2012. He worked as a postdoctoral fellow at the University of Southern California (2012-2014) and The Ohio State University (2014-2016). His research pursues innovative studies that advance our understanding of how people learn and how to assess and foster transformative learning, especially in technology-rich learning environments. More specifically, Kim's program of research focuses on designing and developing learning technologies that enable learners to receive personalized support, while also helping educators adapt problem-centered pedagogies by providing insights into individual students' learning progress. He is dedicated to exploring AI techniques to collect, externally represent, and diagnose learner characteristics such as cognition, motivation, and emotion. In this effort, he founded the **AI2 Research Laboratory** that builds on theories of learning and instruction to create innovative learning environments that maximize learner capacity to achieve learning goals. The laboratory fosters interdisciplinary and cross-institutional collaborations, uniting experts in learning sciences, computer sciences, STEM educators, and literacy researchers from multiple institutions.

The SMART System & Concept Learning

I've developed an AI technology known as the Student Mental Model Analyzer for Research and Teaching (SMART) system. SMART is a web-based platform where students engage with learning material. They summarize what they've read or describe their understanding of problem scenarios. SMART uses AI to analyze language data and concept maps, helping learners grasp concepts and assess their understanding. This system is particularly beneficial for adult learners engaged in concept learning, a process that builds a strong understanding of STEM content through reading or online video lectures. Concept learning, a key aspect of cognitive presence, involves constructing meaning through reflection, discourse, and critical thinking. AI applications like SMART support self-paced concept learning, foster positive perceptions of AI in education, and even impact learner performance in other tasks.

Over the past two years, I've implemented SMART in English and Biology classes at TCSG Colleges, benefiting around 400 adult learners. We hypothesized that SMART's AI-based formative assessment and feedback would engage adult learners in concept learning and deepen their understanding. Additionally, we explored whether learners' micro-level concept learning on SMART could enhance their transition to more complex STEM assignments. To address these questions, we gathered data from various sources, including interviews, discussions, surveys, and classroom scores. Analysis of this data revealed that adult learners effectively engaged with SMART, constructing appropriate mental models of the materials. Their concept learning positively influenced motivation and classroom performance, indicating that SMART's personalized support aided learners in reflection, regulation, and advancement of concept learning. SMART's insights also supported instructors in understanding individual learner progress and refining their instruction.

Education Innovations & Future Directions

Our work doesn't stop here. We're currently developing data visualization tools for SMART, allowing learners to assess their learning patterns and performance. This feature, available in Fall 2023, empowers learners to review their behavior and performance on SMART, while instructors gain insights to enhance online class management. We're integrating ChatGPT with SMART, leveraging autonomous ChatGPT techniques to automate expert model generation for efficient text analysis. This project involves generating explainable AI feedback messages and personalized feedback tailored to individual learners. By incorporating generative AI, learners can engage with diverse writing examples and integrate them into their knowledge models.

Through our research journey, we've explored SMART in two TCSG classes, conducting micro-level field tests that assess task performance and meso-level impacts on learner engagement and performance. As we move into Year 3, our focus shifts to concept learning in occupational skills and workforce development for adult learners in online reskilling and upskilling programs. We'll employ Randomized Controlled Trials (RCTs) and quasi-experiment designs to examine how personalized learning at different levels impacts learners, considering micro, meso, and macro contexts. This research aims to uncover the intricate dynamics between learners' constraints, experiences, and online learning with AI tools.

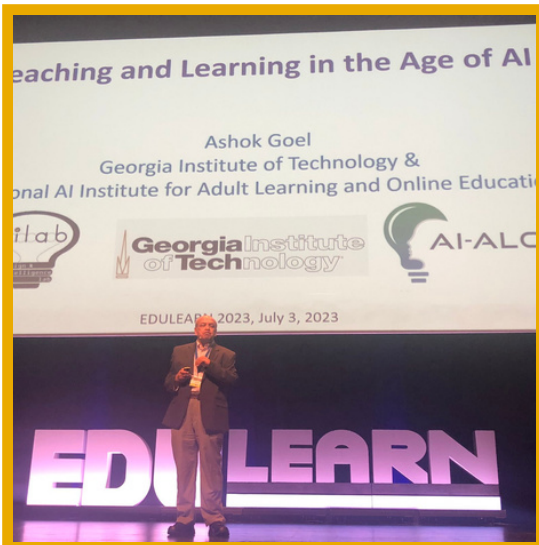
Collaboration & Outreach



Michael Hoffman, the participatory design team lead at AI-ALOE, co-led the Conference on Ethical and Responsible Design in the National AI Institutes in May 2023, which brought representatives from 14 AI institute to Georgia Tech to discuss ethical and responsible design of AI.



The online symposium on "**Mental Model in Human-AI Interaction**" organized by Qiaosi (Chelsea) Wang has concluded, providing insights into the construction and adaptation of various mental models during interactions with advanced AI. Attendees explored ways to leverage these mental models to enhance human-AI interaction and foster more effective collaborations with AI systems. Though the event has passed, the valuable discussions and learnings will continue to shape the future of human-AI relationships.



During the EDULEARN23 conference in Palma de Mallorca, Spain, Ashok K. Goel, Director of AI-ALOE, delivered a keynote speech titled "**Teaching and Learning in the Age of AI.**" He addressed the challenge of reskilling and upskilling millions of adults in our technology-driven society. Online education was highlighted as a crucial medium to reach adult learners, providing access to extensive learner data. Goel shared AI-ALOE's vision of developing AI cognitive assistants to personalize adult online learning using this data, emphasizing the importance of understanding adult learners' needs, participatory AI design, human-AI collaboration, learning analytics, and a robust infrastructure.



AI-ALOE is leading the organization and preparation of a special issue of AAAI's AI Magazine devoted to the AI Institutes. The special issue will feature the research at the eighteen Institutes in the first two cohorts and is expected to be published in early 2024.

Student Highlights



Jinho Kim

Meet **Jinho Kim**, an AI-ALOE graduate research assistant and second year Ph.D. student in the Instructional Technology program at the Department of Learning Sciences at Georgia State University and advised by AI-ALOE researcher Min Kyu Kim and head of the **A12 Research Labs**. She is on a team interested in seeking innovative learning environments for effective teaching and learning. Kim has presented two conference proceedings at the ISLS (International Society of Learning Sciences) Annual Meeting 2023 and have the following publications in progress:

1. Kim, J., Haddadian, G., & Kim, M. (accepted). An investigation of knowledge-based AI vs. human evaluation in academic summary evaluation: Similarities, dissimilarities, and being toward mutual understandings. Proceedings of the 17th International Conference of the Learning Sciences/Computer-Supported Collaborative Learning (ICLS/CSCL-2023). Montréal, Canada: International Society of the Learning Sciences
2. Bae, Y., Kim, J., & Kim, M. (accepted). Clustering cognitive engagement changes in a longitudinal traced discussion data from an online course. Proceedings of the 17th International Conference of the Learning Sciences/Computer-Supported Collaborative Learning (ICLS/CSCL-2023). Montréal, Canada: International Society of the Learning Sciences

What is your primary research area(s) with AI-ALOE?

Through my work with AI-ALOE, my primary focus has been on the research and development of SMART (Student Mental Model Analyzer for Research and Teaching). SMART, an AI-powered technology, serves to deliver insightful formative feedback tailored for summary writing. My areas of interest are personalization in concept learning and AI-augmented summary writing.

What motivates and guides your research at AI-ALOE?

My research at AI-ALOE is guided by a motivation to positively impact adult online education through innovative AI-based solutions. The opportunity to contribute to the development of tools that aim to personalize learning experiences, making learning enjoyable, effective, engaging, and meaningful, drives my passion for this work. The dynamic and ever-evolving field of AI excites me, as it presents numerous opportunities for advancements in education. Additionally, working within the AI-ALOE project alongside skilled and dedicated professionals, and seeing the advancements made by other research teams inspires me.

How did you become interested in your research field?

My academic journey began as an education major with a primary goal of providing better educational experiences. However, a chance encounter with a computer science poster ignited my curiosity, leading me to take introductory courses in the subject. The more I explored computer science, the more I realized its potential to integrate with education, as students in computer science often lacked education expertise while those in education faced challenges due to limited technical knowledge. I pursued a master's degree in educational technology to further delve into this. During that time, I engaged in activities to see how computer science could be used to improve online education by trying to automate data collection and analysis, and making online learning environments for classes where I served as a teaching assistant. Currently, my primary interest lies in utilizing AI technology in educational tools to create more personalized learning experiences for learners.

Do you have a favorite hobby outside of research?

I enjoy tinkering and making things with my hands. I've played around with 3D printers, 3D pens, and toy models, as well as small art projects like cross-stitching and knitting.

Could you share an interesting and enjoyable tidbit about yourself?

Fun fact—in undergrad, I chose to go to Finland as an exchange student because of a delicious salmon I once ate came from Scandinavia. I ended up loving it there. Also, I'm trying to take up Finnish again. I've reached a 150-day streak on Duolingo; fingers crossed that I can master the language!



During the AI-ALOE External Advisory Board (EAB) Meeting in May, researchers from the institute showcased their projects, leveraging AI technologies to enhance adult learning and online education through eight posters. Among these researchers are Jinho Kim, who received the 2023 Outstanding Ph.D. Student in Learning Technologies Award in the College of Education and Human Development at Georgia State University (GSU), and Lia Haddadian, who was awarded the 2023-2024 Doctoral Fellowship by the Department of Learning Science at GSU. Both Jinho and Lia are Graduate Research Assistants (GRAs) working with AI-ALOE Researcher Min Kyu Kim, an associate professor of Learning Sciences at Georgia State University.

Publications

AI-ALOE researchers have contributed a total of 30 publications last year.

An, S., Weigel, E., & Goel, A. K. (2022). Effects of Guidance on Learning About Ill-defined Problems. In International Conference on Intelligent Tutoring Systems (pp. 303-312). Springer, Cham.

An, S., Weigel, E., & Goel, A. K. (2022). Effects of Guidance on Learning About Ill-defined Problems. In International Conference on Intelligent Tutoring Systems (pp. 303-312). Springer, Cham.

Bae, Y., Kim, J., & Kim, M. (2023). Clustering cognitive engagement changes in a longitudinal traced discussion data from an online course. Proceedings of the 17th International Conference of the Learning Sciences/Computer-Supported Collaborative Learning (ICLS/CSCL-2023). Montréal, Canada: International Society of the Learning Sciences.

Kim, J., Haddadian, G., & Kim, M. (2023). An investigation of knowledge-based AI vs. human evaluation in academic summary evaluation: Similarities, dissimilarities, and being toward mutual understandings. Proceedings of the 17th International Conference of the Learning Sciences/Computer-Supported Collaborative Learning (ICLS/CSCL-2023). Montréal, Canada: International Society of the Learning Sciences.

1. Harmon, S. (2022, September 19). The Newcomers: Opening an Institution to More and More Learners. The Evollution. <https://evollution.com/attracting-students/accessibility/the-newcomers-opening-an-institution-to-more-and-more-learners/>

Holmes, L., Crossley, S. A., Morris, W., Sikka, H., & Trumbore, A. (2023). Deidentifying Student Writing with Rules and Transformers. In Proceedings of the 24th International Conference on Artificial Intelligence in Education (AIED). Tokyo, Japan.

Lawley, L., & MacLellan, C.J. (2023). Interactive learning of hierarchical tasks from dialog with GPT arXiv preprint arXiv:2305.10349. <https://doi.org/10.48550/arXiv.2305.10349>

MacLellan, C.J., Stowers, K., Brady, L. (2022). Evaluating Alternative Training Interventions Using Personalized Computational Models of Learning. Advances in Cognitive Systems, 10, 1-18.

Morris, W., Crossley, S., Holmes, L., Ou, C., McNamara, D., Dascalu, M. (2023) press) Using Transformer Language Models to Provide Formative Feedback in Intelligent Textbooks. In Proceedings of the 24th International Conference on Artificial Intelligence in Education (AIED). Tokyo, Japan.

Morris, W., Crossley, S., Holmes, L., & Trumbore, A. (2023). Using transformer language models to validate peer-assigned essay scores in Massive Open Online Courses (MOOCs). In Proceedings of the 13th International Learning Analytics and Knowledge Conference (LAK2023). pp. 315-323. doi.org/10.1145/3576050.3576098

Ou, C., Goel, A. K., & Joyner, D.A. (2022) Towards a Pedagogical Framework for Designing and Developing iTextbooks. In Proceedings of AI in Education Workshop on Intelligent Textbooks, Durham, UK, July 2022. https://ceur-ws.org/Vol-3192/itb22_p6_full4226.pdf

Taneja, K., Sikka, H. & Goel, A. (2022). Human-AI Interaction Design in Machine Teaching. arXiv preprint arXiv:2206.05182.

Wang, Q., & Goel, A. K. (2022). Mutual Theory of Mind for Human-AI Communication. arXiv preprint arXiv:2210.03842.

Wang, Q., Jing, S., & Goel, A. K. (2022). Co-designing AI agents to support social connectedness among online learners: Functionalities, social characteristics, and ethical challenges. Designing Interactive Systems Conference. <https://doi.org/10.1145/3532106.3533534>

Zhang, Q. & MacLellan, C. J. (2022). (A)I Will Teach You to Play Gomoku: Exploring the Use of Game AI to Teach People. Proceedings of the Ninth ACM Conference on Learning @ Scale (pp. 263-266). <https://doi.org/10.1145/3491140.3528331>

**To see the full list of publications
on our website, click here**

Presentations

The AI-ALOE researchers have made significant contributions within their research areas, encompassing a total of 25 presentations, invited talks, and panel discussions at the broader community beyond AI-ALOE.

Below you will find a selected list of our **External Presentations from AI-ALOE Researchers**:

Presenter	Presentation/Event	Date
Ashok Goel	Teaching and Learning in the Age of AI EDULEARN 2023 Keynote	May 2023
Ashok Goel	Explores AI's Impact on Education Duke University's Emerging Pedagogies Symposium	May 2023
Chris Dede	Immersive Intelligence and Education iLRN 2023	May 2023
Michael Hoffmann	Participatory Design for Human Well-being Conference on Ethical & Responsible Design in the National AI Institutes at Georgia Tech	May 2023
Christopher MacLellan	Human-Guided ML for Human-Machine Teaming Army Research Labs Human Machine Teaming Paradigm Development Meeting	May 2023
Adam Coscia	Visualizations for Interpreting Large Language Models GVU Center Research Showcase	April 2023
Ashok Goel & Chris Dede	AI Institutes Symposium American Education Research Association Annual Meeting	April 2023
Min Kyu Kim	Using Machine Learning for Cognitive Presence Detection in Asynchronous Online Learning American Educational Research Association Annual Meeting	April 2023

**To see the full list of presentations
on our website, [click here](#)**

CONNECT WITH US



AI-ALOE is excited to announce its active participation in the upcoming SAIL '23 Leadership Summit, scheduled to take place from October 23 to 26, 2023, at the esteemed Georgia Tech Hotel and Conference Center in Atlanta, Georgia. As a prominent contributor in the field of artificial intelligence and educational technology, AI-ALOE is committed to advancing the frontiers of knowledge and innovation. The SAIL '23 Leadership Summit provides an ideal platform for us to showcase our latest developments, groundbreaking research, and cutting-edge solutions that are shaping the future of education and AI integration.



LEARN MORE

You can connect with AI-ALOE through various platforms:

- **Visit** our official website at <https://www.aialoe.org> to explore our research, projects, and latest updates.
- **Follow** us on Twitter at https://www.twitter.com/ai_aloe for real-time news, insights, and engaging discussions.
- **Subscribe** to our YouTube channel at <https://www.youtube.com/@ai-aloe> to access informative videos, interviews, and presentations related to our work.
- **Connect** with us on LinkedIn at <https://www.linkedin.com/company/ai-aloe> to stay informed about our achievements and network with like-minded professionals.
- **Find** us on AIVO at <https://www.aiinstitutes.org/institute-ai-aloe> to access additional resources and information about our participation in the broader AI community.

We look forward to engaging with you and sharing our passion for advancing human-AI interaction and online education!



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